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May 18, 2001

Mr. Arthur J. Pongratz
Director of Facilities
Enfield Public School
27 Shaker Road
Enfield, Connecticut 06082

**SUBJECT:** **Soil Boring Program**

**SITE:** **Enfield Public Schools**

**PROJECT #:** **P-01-0043/E**

Dear Mr. Pongratz:

Enclosed for you review is a soil sampling program report prepared for Enfield Public Schools by EnviroMed Services, Inc. This report presents the results of samples obtained from soils that will be disturbed due to excavation, construction and expansion activities. Areas of subsurface soils to be sampled were divided into:

a) areas suspected of potential contamination with total petroleum hydrocarbons (TPH), and polychlorinated biphenyls (PCBs) – asphalt parking lots, paved sidewalks, and

b) areas suspected to be treated with pesticides – football/soccer fields, play areas, and landscaped areas.

This investigation was designed to supplement the Construction Hygiene Plan that will be developed to satisfy health and safety responsibilities for areas adjacent to occupied schools. Schools selected for construction activities are presented below:

1. Henry Barnard Elementary School
   27 Shaker Road

2. Prudence Crandall Elementary School
   150 Brainard Road

3. Eli Whitney Elementary School
   94 Middle Road

4. Hazardville Memorial Elementary School
   68 North Maple

5. Nathan Hale Elementary School
   5 Taylor Road

6. J.F. Kennedy Middle School
   155 Rafia Road

7. Edgar H. Parkman Elementary School
   165 Weymouth Road

8. Harriet Beecher Stowe Elementary School
   117 Post Office Road

9. Enfield Street Elementary School
   1318 Enfield Street

10. New Head Start
    baseball/soccer field between Enfield Street Elementary School and Enfield High School

*Note:* Based on the construction and renovation drawings prepared by *Jeter, Cook & Jepson Architects, Inc.* of Hartford, CT in December 21, 2000 some of schools have two or three locations planned for future renovation activities.

In order to accomplish these objectives the following activities were performed:

## I. Soil Boring Program and Soil Sampling

On April 18-20, 2001, a soil boring program was performed in all above mentioned schools. All borings were strategically placed based upon review of technical drawings.

Soil borings were completed using a truck-mounted small diameter boring machine (Concord Probe 9201). A soil collected from each completed boring was blended into one composite* sample for each depth, and each location. All sampling equipment was cleaned and decontaminated before and between collection of individual soil samples using standard decontamination methods as outlined in the EnviroMed *Standard Operating Procedures for Environmental Field Investigations Program* manual (e.g. laboratory grade detergent wash, double rinse, air dry).

*Equal portion of the soil sample obtained from each boring at a depth of 6-inches, 1.5-feet and 3-feet were placed upon polyethylene sheeting and blended into a single composite sample for each depth using a steel trowel.

Section I of this report describes methods used to obtain soil samples and details laboratory analytical results for each school.

Generally soil collected from borings performed in the paved areas were analyzed for extractable total petroleum hydrocarbons (ETPH, CT approved method), polychlorinated biphenyls (PCBs), and total pesticides (EPA Method 8081). Soil collected from borings completed in playground, landscaped areas, football fields were analyzed for total pesticides. Samples were collected at depths of 6-inches, 1.5-feet, and 3-feet in each location planned for future renovation and mixed into one composite sample per depth. All samples from a depth of 6-inches, and selected samples from 1.5-feet, and 3-feet were sent for the above noted laboratory analyses. See Table 1-3, and Appendix A.

All samples retained for laboratory analysis were collected and stored in accordance with EPA protocols, shipped to an EPA certified laboratory with signed chain of custody.

## II. Regulatory Overview

The results of this subsurface investigation indicate that detectable levels of total pesticides, and extractable total petroleum hydrocarbons had been identified in soil samples collected from areas planned for future construction activities. EnviroMed has compared the analytical results of this assessment to the State of Connecticut Remediation Standard Regulations (RSR) substance specific numerical criteria as guidance for determining which areas of contamination may require future remedial actions, additional assessment, or monitoring (R.C.S.A. Section 22a-133k-l). See Section II for RSR Standards.

The analytical results were compared to the Residential Direct Exposure Criteria, and Pollutant Mobility Criteria for GA areas.

### Direct Exposure Criteria

Direct Exposure Criteria (DEC) apply to soils within fifteen feet of the ground surface. Since the planned development is related with the construction activities around an occupied schools, the soil analytical results have been compared to the Residential DEC substance specific numerical criteria.

The Residential DEC (500 ppm) for ETPH was not exceeded for any soil sample collected from the Site.

The Residential DEC was not exceeded for PCB or pesticides analyses for any of the soil samples submitted for laboratory analysis.

### Pollutant Mobility Criteria

Pollutant Mobility Criteria apply to soils above the water table. Since the subject site is located within an area of GA classified ground water, the GA ground water Pollutant Mobility values apply to all soils above the local water table.

According to soil analytical data the GA Pollutant Mobility Criteria was not exceeded for ETPH, PCB, or pesticides for any of the soil samples submitted for laboratory analysis.

## III. Conclusions

Based upon the analytical data for soil samples collected from the proposed school expansion areas, the Residential DEC, and GA Pollutant Mobility Criterion were not exceeded for any soil samples collected from the Site.

If you require any additional information please call me or Douglas Rhoads in New Haven at (203) 786-5580.

Sincerely,
EnviroMed Services, Inc.

Joanna Golos
Geologist